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BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Application Number: 10/712,970
Filing Date: November 13, 2003
Appellant(s): BIRRENKOTT ET AL.

Joseph H. Golant
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed August 2, 2005 appealing from the Office action mailed March 2, 2005.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

4,878,619	Norman	11-1989
2,991,939	Packard	7-1961
6,578,776	Shanklin et al.	6-2003
3,797,741	Spencer	3-1974

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claims 1-5, 8, 9, 11, 12, 14-17, 19-21, 23-25, 27-29, 31-33 stand rejected under 35 U.S.C. 102(b) as being anticipated by Norman (4,878,619).

Norman discloses the claimed invention. Applicant's claims are reproduced in plain text with explanations in bold text.

Claim 1. A spraying device comprising:

a cartridge **10** containing a first liquid **(cleaning solution; column 1, lines 15-20; column 1, lines 35-37)**, the cartridge being oriented such that gravity exerts a downward force on the first liquid **(this condition is inherent because the cartridge and cleaning fluid of Norman is subjected to the gravitational pull of the Earth and gravity by definition exerts a downward force)**;

the sprayer body **12** comprising:

a conduit **80** for receiving a second liquid **(water; column 3, line 10)**;

a movable valve structure **82** having first **(passageway in pin 28)** and second **112** liquid passageways, the first passageway **(passageway in pin 28)** communicating with the first liquid **(cleaning solution; column 1, lines 15-20; column 1, lines 35-37)** from the cartridge **10** and the second passageway **112** communicating with the second liquid **(water; column 3, line 10)** flowing from the conduit **80**;

a manual actuator **120** positioned in operative relationship with the movable valve structure **82** enabling movement of the valve structure **82** between at least three discrete positions including:

a) a first position **(Fig 3A)** enabling the second liquid to flow through the valve structure to create a reduced pressure in the valve structure which draws the first liquid out of the cartridge and into the valve structure whereby the first and the second liquids mix to form an outlet stream which flows through the valve structure **(column 3, line 62 through column 4, line 6)**;

b) a second position **(Fig 3B)** enabling the second liquid only to flow through the valve structure and blocking the flow of the first liquid through the valve structure **(column 4, lines 31-45; flow of the first liquid is blocked by the high pressure of the water caused by reduction 114 and check valve 40)**, and

c) a third position **(not shown but inherent; the valve 82 can be rotated 360 degree or at least 180 degrees; compare figures 3A and 3B; see column 3, lines 44-61; since the valve 82 can be rotated at least 180 degrees, there is a mid position where passageway 112 is perpendicular to conduit 80; in such a position, neither the first liquid in the cartridge 10 nor the second liquid from**

conduit 80 can flow through valve structure 82) blocking the first an second liquids form flowing through the valve structure; and

an orifice **42, 50, 116** disposed in the spraying device for metering **(cleaner in cartridge 10 is metered through metering valve 40; column 4, lines 4-6)** a predetermined amount of the first liquid **(cleaning solution; column 1, lines 15-20; column 1, lines 35-37)** from the cartridge **10** into the valve structure **82** when the valve structure **82** is in the first position **(Fig 3A)** to achieve a predetermined ratio of the first liquid **(cleaning solution; column 1, lines 15-20; column 1, lines 35-37)** to the second liquid **(water; column 3, line 10)** in the outlet stream **(flow in section 130, 132, 134 and emerging out of orifice 104)**.

Claim 2. The spraying device of claim 1, wherein the first liquid **(cleaning solution; column 1, lines 15-20; column 1, lines 35-37)** is a chemical **(a cleaner is inherently a chemical; all liquid is made of some combination of elements from the known periodic table)**.

Claim 3. The spraying device of claim 1, wherein the second liquid **(water; column 3, line 10)** is water.

Claim 4. The spraying device of claim 1, wherein the metering orifice **42, 50, 116** is disposed in the sprayer body **12 (orifice 116 located in spray body 12 inherently meters the liquid in cartridge 10 because it has a finite size)**.

Claim 5. The spraying device of claim 1, wherein the metering orifice **42, 50, 116** is disposed in the cartridge **10 (orifice 42, 50 located in cartridge 10 are parts of metering valve 40; see column 4, lines 4-6)**.

Claim 8. The spraying device of claim 1, wherein the valve structure **82** is coupled to a spray nozzle **104**.

Claim 9 The spraying device of claim 8, wherein the spray nozzle 104 is rotatably adjustable to provide different spray patterns **(note that nozzle 104 is not symmetrical as can be seen from figures 3, 3A and 3B; because nozzle 104 is not symmetrical, the entire devise of Norman including the nozzle 104 can be rotated to at least some extent to achieve a different spray pattern, i.e. holding the device as shown in figure 1 will create a somewhat flat and wide spray pattern while rotating the device 90 degrees will result in a narrow and vertical spray pattern)**.

Claim 11. The spraying device of claim 1, wherein the cartridge **10** is capable **(merely requires the capability)** of being disconnected from the sprayer body **12** to enable the first liquid to be dispensed from the cartridge **10** by squeezing the cartridge **10** in an inverted position **(cartridge 10 is made of plastic and is detachable from sprayer body 12; column 2, lines 13; even if pick-up tube 34 does not flex or**

move, cartridge 10 can be squeezed and dispensed to some extent in an inverted position at least when the cartridge is completely full).

Claim 12. The spraying device of claim 1, wherein the cartridge **10** includes a check valve **40 (column 4, line 41)** for keeping the cartridge sealed until the first liquid is drawn out of the cartridge.

Claim 14. The spraying device of claim 1, wherein the cartridge **10** is not refillable **(during normal operation, because of check valve 40, the cartridge cannot be filled by fluid flowing from conduit 80; additionally, column 1, lines 5-10, discloses a interchangeable and disposable cleaning fluid cartridge)**.

Claim 15. The spraying device of claim 1, wherein the cartridge **10** is refillable **(flexible fitment 26 is a separate element from next 24 of cartridge 10; fitment 26 is capable of being removed to fill cartridge 10; cartridge 10 has the ability to be refilled)**.

Claim 16. The spraying device of claim 1, wherein the cartridge **10** includes a secondary threaded closure **24 (neck 24 above flange 22 is threaded as shown in figures 1, 2A and 2B)**.

Claim 17. The spraying device of claim 1, wherein the conduit **80** is coupled to a hose coupler **72**.

Claim 19. A spraying device comprising:

a sprayer body **12** coupled to a cartridge **10** containing a first liquid **(cleaning solution; column 1, lines 15-20; column 1, lines 35-37)**;

the sprayer body **12** comprising:

a conduit **80** for receiving a second liquid **(water; column 3, line 10)**;

a valve structure **82** coupled to the conduit **80**, the valve structure **82** allowing passage of the second liquid **(water; column 3, line 10)** through the valve structure **82** to create a reduced pressure **(column 3, line 62 through column 4, line 6)** that draws the first liquid out of the cartridge and into the valve structure without the need for a dip tube, the valve structure enabling the first and second liquids to mix and form an outlet stream **(Note that the recitation "...allowing passage of the second liquid through the valve structure to create a reduced pressure that draws the first liquid out of the cartridge and into the valve structure without the need for a dip tube..." merely requires that the valve structure "allow" the function "passage of the second liquid through the valve structure to create a reduced pressure that draws the first liquid out of the cartridge and into the valve structure without the need for a dip tube." The expansion of flow from passage 114 to passage 118 in valve structure 82 creates a reduced pressure and draws the first liquid into the valve structure whether or not the dip tube 34 is present. Merely removing the**

dip tube 34 from the device of Norman does not prevent the pressure reduction at orifice 116 in figure 3A. As long as liquid is present at or supplied to pin 28, the liquid flow through passageway 112 will perform the function of creating a reduced pressure that draws the first liquid out of the cartridge and into the valve structure. Norman's passage in pin 28 and passageway in fitment 26 is analogous to applicant passageway extending from 42 to 40 in applicant's figure 3. Claim 19, as presented in functional form, does not limit the claimed invention as not having a dip tube),

the valve structure being movable between at least three positions including a first position **(Fig 3A)** for allowing the first and the second liquids to flow, a second position **(Fig 3B)** for allowing the second liquid to flow and for blocking the first liquid, and a third position **(not shown but inherent; the valve 82 can be rotated 360 degree or at least 180 degrees; compare figures 3A and 3B; see column 3, lines 44-61; since the valve 82 can be rotated at least 180 degrees, there is a mid position where passageway 112 is perpendicular to conduit 80; in such a position, neither the first liquid in the cartridge 10 nor the second liquid from conduit 80 can flow through valve structure 82)** for blocking flow of the first and the second liquids; and

an orifice **42, 50, 116** disposed in the spraying device for metering **(cleaner in cartridge 10 is metered through metering valve 40; column 4, lines 4-6)** a predetermined amount of the first liquid into the valve structure **82** to achieve a

predetermined ratio of the first liquid to the second liquid in the outlet stream **(flow in section 130, 132, 134 and emerging out of orifice 104)**.

Claim 20. The spraying device of claim 19, wherein the metering orifice **42, 50, 116** is disposed in the sprayer body **12 (orifice 116 located in spray body 12 inherently meters the liquid in cartridge 10 because it has a finite size)**.

Claim 21. The spraying device of claim 19, wherein the metering orifice **42, 50, 116** is disposed in the cartridge **10 (orifice 42, 50 located in cartridge 10 are parts of metering valve 40; see column 4, lines 4-6)**.

Claim 23. The spraying device of claim 19, further including a spray nozzle **104** coupled to the valve structure **82** and being rotatably adjustable to provide different spray patterns **(note that nozzle 104 is not symmetrical as can be seen from figures 3, 3A and 3B; because nozzle 104 is not symmetrical, the entire devise of Norman including the nozzle 104 can be rotated to at least some extent to achieve a different spray pattern, i.e. holding the device as shown in figure 1 will create a somewhat flat and wide spray pattern while rotating the device 90 degrees will result in a narrow and vertical spray pattern)**.

Claim 24. The spraying device of claim 19, wherein the cartridge **10** is capable **(merely requires the capability)** of being disconnected from the sprayer body **12** to

enable the first liquid to be dispensed from the cartridge **10** by squeezing the cartridge **10** in an inverted position **(cartridge 10 is made of plastic and is detachable from sprayer body 12; column 2, lines 13; even if pick-up tube 34 does not flex or move, cartridge 10 can be squeezed and dispensed to some extent in an inverted position at least when the cartridge is completely full)**.

Claim 25. The spraying device of claim 19, wherein the cartridge **10** includes a check valve **40 (column 4, line 41)**.

Claim 27. A spraying device comprising:

a sprayer body **12** for removable connection with a cartridge **10** containing a first liquid **(cleaning solution; column 1, lines 15-20; column 1, lines 35-37)**, the cartridge **10** being oriented such that gravity exerts a downward force on the first fluid **(this condition is inherent because the cartridge and cleaning fluid of Norman is subjected to the gravitational pull of the Earth and gravity by definition exerts a downward force)**;

the sprayer body **12** comprising:

a conduit **80** for receiving a second liquid **(water; column 3, line 10)**;

a rotatable valve structure **82** coupled to an actuator **120** and the conduit **80**,

the rotatable valve structure **82** allowing the second liquid **(water; column 3, line 10)** to flow through the valve structure **82** to create a low pressure **(column 3,**

line 62 through column 4, line 6) that draws the first liquid out of the cartridge and into the valve structure **82** without the need for a dip tube, the rotatable valve structure enabling the first and the second liquids to mix and form an outlet stream **(Note that the recitation "...allowing the second liquid to flow through the valve structure to create a low pressure that draws the first liquid out of the cartridge and into the valve structure without the need for a dip tube..." merely requires that the valve structure "allow" the function "second liquid to flow through the valve structure to create a low pressure that draws the first liquid out of the cartridge and into the valve structure without the need for a dip tube." The expansion of flow from passage 114 to passage 118 in valve structure 82 creates a reduced pressure and draws the first liquid into the valve structure whether or not the dip tube 34 is present. Merely removing the dip tube 34 from the device of Norman does not prevent the pressure reduction at orifice 116 in figure 3A. As long as liquid is present at or supplied to pin 28, the liquid flow through passageway 112 will perform the function of creating a reduced pressure that draws the first liquid out of the cartridge and into the valve structure. Norman's passage in pin 28 and passageway in fitment 26 is analogous to applicant passageway extending from 42 to 40 in applicant's figure 3. Claim 27, as presented in functional form, does not limit the claimed invention as not having a dip tube)**,

the actuator **120** and the rotatable valve structure **82** being movable between at least two positions including a first position **(Fig 3A)** for allowing the first and

second liquids to flow and a second position **(Fig 3B)** for allowing the second liquid to flow and for blocking the first liquid from flowing; and

an orifice **42, 50, 116** disposed in the spraying device for metering **(cleaner in cartridge 10 is metered through metering valve 40; column 4, lines 4-6)** a predetermined amount of the first liquid into the valve structure **82** to achieve a predetermined ratio of the first liquid to the second liquid in the outlet stream **(flow in section 130, 132, 134 and emerging out of orifice 104)**.

Claim 28. The spraying device of claim 27, wherein the metering orifice **42, 50, 116** is disposed in the sprayer body **12 (orifice 116 located in spray body 12 inherently meters the liquid in cartridge 10 because it has a finite size)**.

Claim 29. The spraying device of claim 27, wherein the metering orifice **42, 50, 116** is disposed in the cartridge **10 (orifice 42, 50 located in cartridge 10 are parts of metering valve 40; see column 4, lines 4-6)**.

Claim 31. The spraying device of claim 27, wherein the cartridge **10** is capable **(merely requires the capability)** of being disconnected from the sprayer body **12** to enable the first liquid to be dispensed from the cartridge **10** by squeezing the cartridge **10** in an inverted position **(cartridge 10 is made of plastic and is detachable from sprayer body 12; column 2, lines 13; even if pick-up tube 34 does not flex or**

move, cartridge 10 can be squeezed and dispensed to some extent in an inverted position at least when the cartridge is completely full).

Claim 32. The spraying device of claim 27, wherein the cartridge **10** includes a check valve **40 (column 4, line 41)**.

Claim 33. The spraying device of claim 27, wherein the actuator **120** and the rotatable valve structure **82** are movable into at least a third position **(not shown but inherent; the valve 82 can be rotated 360 degree or at least 180 degrees; compare figures 3A and 3B; see column 3, lines 44-61; since the valve 82 can be rotated at least 180 degrees, there is a mid position where passageway 112 is perpendicular to conduit 80; in such a position, neither the first liquid in the cartridge 10 nor the second liquid from conduit 80 can flow through valve structure 82)** wherein the flow of the first and second liquids are blocked.

Claims 10, 13, 18 and 26 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Norman (4,878,619).

Regarding claim 10, Norman discloses the limitations of the claimed invention with the exception of the cartridge being made of flexible plastic. Norman discloses a the cartridge 10 being made of plastic in column 2, lines 10-14. Official notice is given for flexible plastic. Plastic is inherently flexible, and even if it wasn't, it would have been obvious to a person having ordinary skill in the art at the time of the invention to have

made the cartridge of Norman from flexible plastic for resilience and durability. See US Patent Number 6,578,776 to Shanklin et al., column 4, lines 5-9, for evidence. Also see response to applicant's arguments below.

Regarding claim 13, Norman discloses the limitations of the claimed invention with the exception of the check valve having a duckbill portion and an umbrella portion. Official notice is given a check valve having a duckbill portion and an umbrella portion. It would have been obvious to a person having ordinary skill in the art at the time of the invention to have replaced the check valve of Norman with a check valve having a duckbill portion and an umbrella portion to provide an integral/one piece check valve with control of collapse. See US Patent Number 3,797,741 to Spencer, figures 10-12, 17 and 20, column 5, lines 3-20, and column 6, lines 19-26, for evidence. Also see response to applicant's arguments below.

Regarding claims 18 and 26, Norman discloses the limitations of the claimed invention with the exception of the anti-siphon unit. The specification, on page 5 paragraph 26, provides that anti-siphon units are well known. It would have been obvious to a person having ordinary skill in the art at the time of the invention to have provided an anti-siphon unit to the device of Norman to prevent back flow.

Claims 6, 22 and 30 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Norman (4,878,619) in view of Packard (2,991,939).

Norman discloses the limitations of the claimed invention with the exception of the metering disc. Packard discloses a metering disc 55. It would have been obvious

to a person having ordinary skill in the art at the time of the invention to have provided the metering disc of Packard to the device of Norman to regulate/control the flow (Packard, column 3, lines 20-23).

(10) Response to Argument

Regarding claims 1-5, 8, 9, 11, 12 and 14-17,

Applicant argues that Norman fails to teach the "cartridge containing a first liquid...(is) oriented such that gravity exerts a downward force on the first liquid." Applicant further argues that the "claimed cartridge 12 is oriented to enable gravity assisted flow of the first liquid from the cartridge which in combination with the low pressure created by the water flow at the Venturi location 18, FIG. 3 of the subject application facilitates flow of the first liquid out of the cartridge." Applicant's argument is not commensurate in scope with the claimed invention. The Examiner specifically objected to the recitation "...such that gravity exerts a downward force on the first liquid" recited in claims 1 and 27 in the Office action mailed on September 21, 2004, because it merely says that the liquid is subjected to gravity and nothing more. Any object subjected to gravity by definition experiences a downward force. For example all objects on the Earth are exposed to the gravitational pull of the Earth and experiences a downward force (downward as normally defined and understood to mean towards the center of the Earth). The recitation does not in any way define the orientation of the cartridge or that gravity assists the flow of the first liquid. Applicant was encouraged to amend the claim to recite "gravity fed" but refused, asserting that the recitation is

technically correct. Applicant is technically correct but is only stating what is inherently and factually true unless applicant's device is in outer space and exposed to no gravitational forces. Gravity too exerts a downward force on a glass of water on a table (here on Earth) but the water flows nowhere. Such a recitation says nothing about the orientation of the glass or the water flow in the glass.

Applicant argues that Norman fails to teach "...at least three discrete positions." Norman teaches a valve structure 82 having a manual actuator 120. Figures 3A shows the position of valve structure 82 rotated 180 degrees from the position shown in Figure 3B. If the valve structure 82 is free to rotate either clockwise or counterclockwise, the valve structure 82 is free to rotate in a 360 degree range. If the valve structure 82 can only rotate either in a clockwise direction or counterclockwise direction, the valve structure 82 is free to rotate in a 180 degree range. Even taking the most limiting situation where the valve structure 82 only rotates in one direction and is only free to rotate in a 180 degree range, the valve structure 82 has an infinite number of positions between the two extreme positions shown in figures 3A and 3B. The valve structure 82 is not a digital valve. It cannot be placed in the position of Figure 3A and then placed in the position of 3B without experiencing intermediate positions. When the valve structure 82 is rotated and the outer surface 117 completed seals the flow path of conduit 80 and 130, flow of the first liquid in cartridge 10 and the flow of the second liquid in conduit 80 are blocked. Applicant's claimed invention does not preclude the trigger valve 76 of Norman because applicant's claims recite the transitional phrase "comprising."

Regarding claim 11,

Applicant argues that Norman's cartridge is not capable of being disconnected from the sprayer bottle to enable the first liquid to be dispensed from the cartridge by squeezing the cartridge in an inverted position because ball 44 will block tube 34. This is an erroneous conclusion. If ball 44 will block tube 34 in an inverted position, ball 34 will also block tube 34 when subjected to the vacuum created at orifice 116, which is clearly not the case. Ball 44 prevents flow into the cartridge and not flow out of the cartridge. Applicant further argues that Norman's cartridge 10 cannot be dispensed in the inverted position unless it is completely full. Applicant's claim does not require that the cartridge be not completely full. When Norman's cartridge 10 is completely full, it can be dispensed in an inverted position until the liquid level drops below ball valve 40. Finally, claim 11 merely requires the capability to so perform.

Regarding claim 12,

Applicant argues that Norman's check valve 40 is not normally closed. Applicant's argument is not commensurate in scope with the claimed invention. Claim 12 does not recite that the check valve has to be normally closed.

Regarding claim 16,

Applicant argues that Norman does not teach the cartridge having a secondary threaded closure. Norman teaches a secondary threaded closure 24. Norman shows the neck 24 having threads on the external surface above flange 22 in figures 1, 2A and 2B. Claim 16 does not further limit the secondary threaded closure. The claim reads on Norman's neck 24. Neck 24 is a closure of cartridge 10 and is threaded.

Regarding claims 19-21 and 23-25,

Applicant argues that the Examiner has ignored the limitation "the valve structure allowing passage of the second liquid through the valve structure to create a reduced pressure that draws the first liquid out of the cartridge and into the valve structure without the need for a dip tube." The claim recites a "valve structure allowing..." It merely requires that the valve structure allow the function to happen. The claim does not preclude the claimed invention from having a dip tube. In Norman's device, the second liquid flow through conduit 80 and passage 112 will cause a reduced pressure at orifice 116 causing suction through pin 28 and fitment 26. The first liquid in cartridge 10 will flow into valve structure 82 whether or not dip tube 34 is present, as long a the first liquid is supplied to pin 28 and fitment 26, i.e. when the cartridge is completely full. Therefore, the valve structure allows the function to happen.

Again, applicant argues that Norman does not disclose the valve structure 82 having three positions. See response above.

Regarding claim 24,

Applicant's argument is the same as in claim 11. See response above for claim 11.

Regarding claims 27-29 and 31-33,

Applicant makes the same arguments directed to the orientation of the cartridge so that gravity exerts a downward force and the absence of a dip tube. See responses above for claims 1 and 19.

Regarding claim 31,

Applicant reiterates the argument in claim 11. See response above for claim 11.

Regarding claim 33,

Applicant argues the three positions of the valve structure. See response above.

Regarding claims 10, 13, 18 and 26,

Applicant challenges the official notice given for flexible plastic material. US Patent Number 6,578,776 to Shanklin et al. is provided as evidence. Shanklin discloses, in column 4, lines 5-9, that flexible plastic material, such as polypropylene, is preferred because it is resilient yet durable. Shanklin is evidence that flexible plastic material is well known in the art and it is preferred because of its resilience and durability. Shanklin too is a chemical sprayer having a cartridge, the spray being attached to a hose.

Applicant challenges the official notice given for check valve having a duckbill portion and an umbrella portion. US Patent Number 3,797,741 to Spencer is provided as evidence. Spencer teaches a check valve 32 (figures 10-12) having a duckbill portion 36,37 and an umbrella portion 33 made of elastomeric material (column 5, lines 3-20). Spencer also teaches that the resistance of the collapse of the duckbill portion 36,37 is determined by the hardness of the elastomer and their wall thickness. Spencer also teaches a check valve 68 (figures 17 and 20; column 6, lines 19-26) having duck bill (portion having notch 69) and an umbrella portion (mounting portion of valve 68) made of rubber. Spencer provides the motivation that the collapse of the valve can be controlled by the hardness of the elastomer and their wall thickness. Also, it is

knowledge within one of ordinary skill in the art that elastomeric material and rubber are less prone to corrosion and are known for their resilience and durability as evidenced by Shanklin.

Applicant challenges the official notice given for the hose coupler with an anti-siphon unit. Applicant's specification provides evidence. Applicant's specification, on page 5, paragraph 26 provides admission that a hose coupler with an anti-siphon unit is well known in the art. The paragraph states,

> Referring to FIG. 3, fluid conduit 17 is disposed in the sprayer body 10, which can be constructed from any suitable material, such as plastic. A first end of fluid conduit 17 is coupled to hose coupler 14. The sprayer body 10 connects to a **typical** home water supply (e.g., a garden hose) at coupler 14. **In one embodiment, the coupler 14 includes an anti-siphon unit 16 (shown in FIG. 8), which is well known in the art, for preventing or minimizing back flow and leaking from fluid conduit 17**. A second end of fluid conduit 17 is coupled to a valve 20, which is coupled to spray nozzle 48. As used herein, the terms "connected" and "coupled" both mean connected directly or indirectly through intervening components. (Bold added).

Applicant admits that a hose coupler with an anti-siphon unit is well known in the art and that it is used to prevent or minimize back flow and leaking.

Regarding claims 6, 22, and 30,

Applicant asserts that Packard does not disclose the limitations of claims 6, 22 and 30 because Packard teaches a rotatable disk and does not teach the limitations of claims 1, 19 and 27. Packard is not relied on for the limitations found in claims 1, 19 and 27. Rather, Packard is only relied on for the teaching of the rotatable metering disk

55. The motivation, to regulate/control the flow, can be found in Packard at column 3, lines 20-23.

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

Christopher Kim
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Conferees:

Steve Ganey
Primary Examiner

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Supervisory Patent Examiner